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September 12, 2016

VIA ELECTRONIC FILING (ECFS)

Marlene H. Dortch, Esq., Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

RE: **EX PARTE PRESENTATION**
Transition from TTY to Real-Time Text Technology
CG Docket No. 16-145

Petition for Rulemaking to Update the Commission's Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology
GN Docket No. 15-178

Dear Ms. Dortch:

The *ex parte* filed on September 8, 2016 on behalf of Hamilton Relay, Inc. ("Hamilton") inadvertently did not include the referenced copy of the presentation discussed at the September 7 meeting. Please accept this corrected filing, which includes the presentation.

In the event that there are any questions concerning this matter, please contact the undersigned.

Respectfully submitted,

WILKINSON BARKER KNAUER, LLP

/s/ David A. O'Connor
Counsel for Hamilton Relay, Inc.

Enclosure
cc (via e-mail): Participants

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September 9, 2016

VIA ELECTRONIC FILING (ECFS)

Marlene H. Dortch, Esq., Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

RE: **EX PARTE PRESENTATION**
Transition from TTY to Real-Time Text Technology
CG Docket No. 16-145

Petition for Rulemaking to Update the Commission's Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology
GN Docket No. 15-178

Dear Ms. Dortch:

On September 7, 2016, Dixie Ziegler and Jeff Knighton of Hamilton Relay, Inc. ("Hamilton"), and the undersigned counsel on behalf of Hamilton, met with Karen Peltz Strauss of the Commission's Consumer and Governmental Affairs Bureau ("Bureau"), and Suzanne Singleton, Eliot Greenwald, and Michael Scott of the Bureau's Disabilities Rights Office.

During the meeting, the participants discussed the attached presentation regarding critical elements of the Commission's proposed transition from traditional TTY services for the deaf and the hard of hearing to Real-Time Text ("RTT") technology. In particular, Hamilton emphasized that wireless carriers need to deliver RTT messages to Telecommunications Relay Service ("TRS") providers in IP format, and not in Baudot TTY format. TRS providers can and should be responsible for handling the protocol conversion between RTT and TTY. In order for relay providers to receive such RTT messages in IP format, wireless carrier and relay provider networks must meet at a common access point, such as a carrier hotel.

As Hamilton noted in its comments and reply comments in this proceeding, relay providers can and should function as common gateways for protocol conversion between RTT and TTY during the backward compatibility period. This approach would be far more cost-effective, because it would obviate the need for each wireless carrier to build and maintain its own individual RTT-TTY gateway. A common gateway approach, in which TRS providers

serve as the entities responsible for RTT-TTY protocol conversion, would leverage existing TTY communication infrastructure to ensure a consistent user experience using proven technology, thus benefiting consumers. The gateway approach would only be needed until the PSTN sunsets.[1]

Finally, the parties discussed that under ATIS standards for RTT, the RTT functionality would likely be defaulted to the "off" mode so as to minimize the carrier costs involved in RTT-TTY protocol conversion. Hamilton encouraged the Commission to mandate that RTT functionality be defaulted to "on" so that consumers can maximize the benefits of the RTT experience without having to manually turn RTT capability on during phone calls. Hamilton noted that if TRS providers serve as the common gateway between RTT and TTY, the cost-saving approach of defaulting RTT to off would no longer be needed, since wireless carriers would not need to maintain RTT-TTY modem conversion on their networks, and instead could rely on TRS providers to perform that function.

This filing is made in accordance with Section 1.1206(b)(1) of the Commission's rules, 47 C.F.R. § 1.1206(b)(1). In the event that there are any questions concerning this matter, please contact the undersigned.

Respectfully submitted,

WILKINSON BARKER KNAUER, LLP

/s/ David A. O'Connor
Counsel for Hamilton Relay, Inc.

Enclosure
cc (via e-mail): Participants

[1] The parties also discussed the fact that RTT will not function in a 2G or 3G environment, even after the PSTN sunsets.

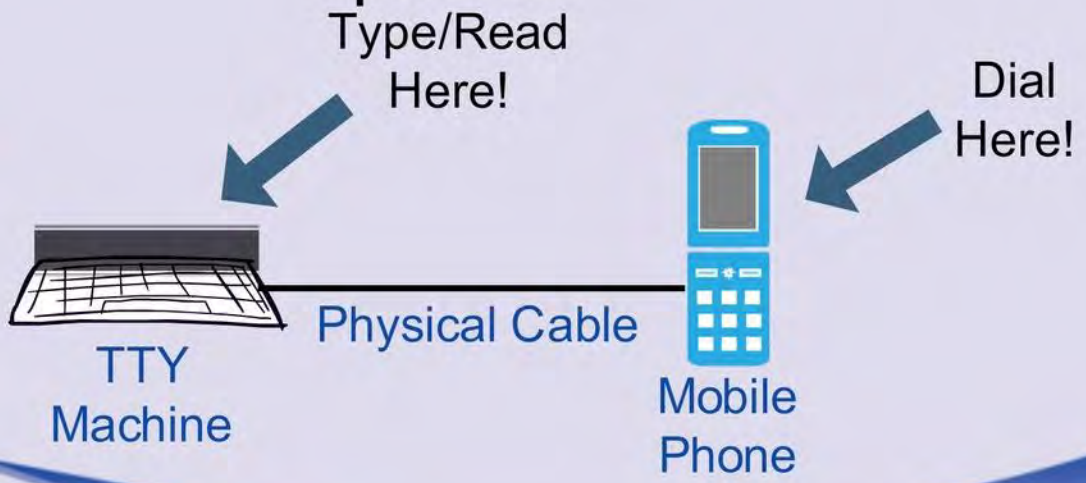
HAMILTON relay

Since 2003, wireless carriers have supported TTY compatible phone calls on their mobile networks.

COMPLIANCE Achieved!

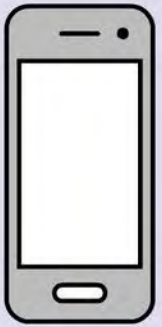
HAMILTON relay

The solution involves a TTY machine attached to a mobile phone.



HAMILTON relay

It is time for an improved solution that works on a single device.



A smartphone on a wireless IP network

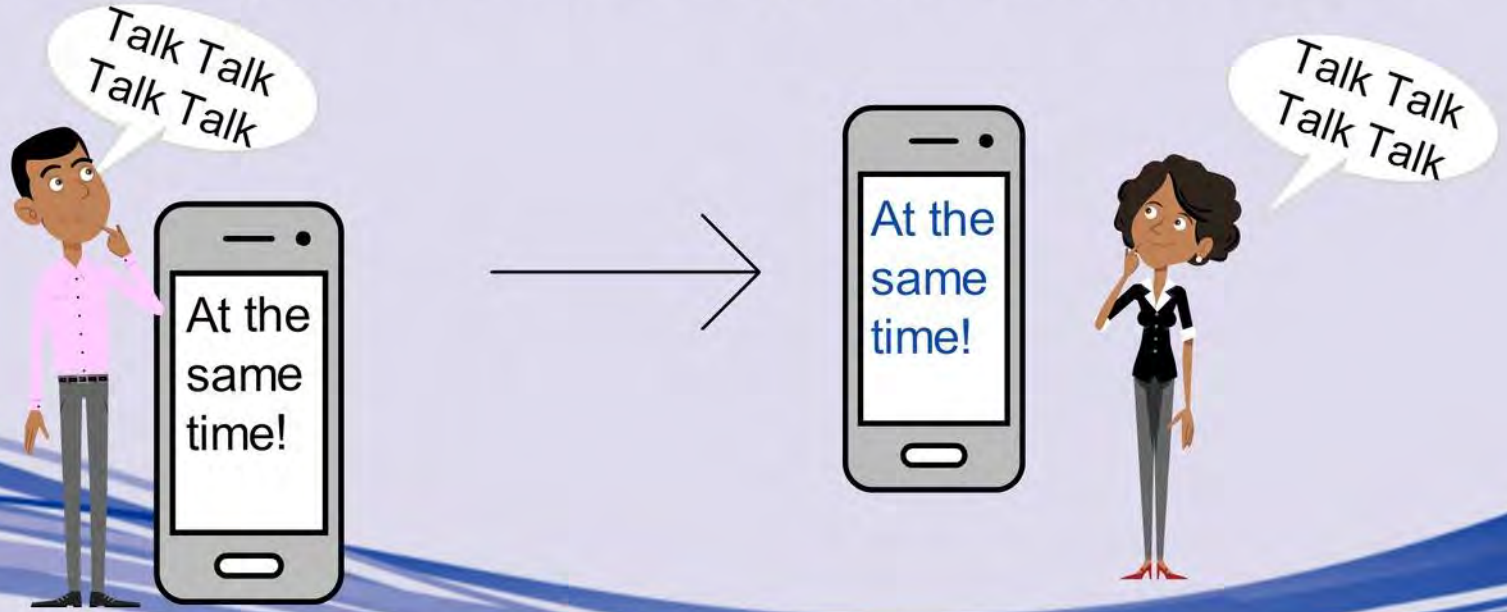
This is potentially great news for consumers because very few people actually use a TTY machine with a mobile phone today.

HAMILTON relay

People started writing standards documents to determine HOW to make this happen.

REAL TIME TEXT (RTT)

Allows you to talk and type on a phone call.



REAL TIME TEXT (RTT)

But it only works on an IP Network, so it can't work on the PSTN for calls with...

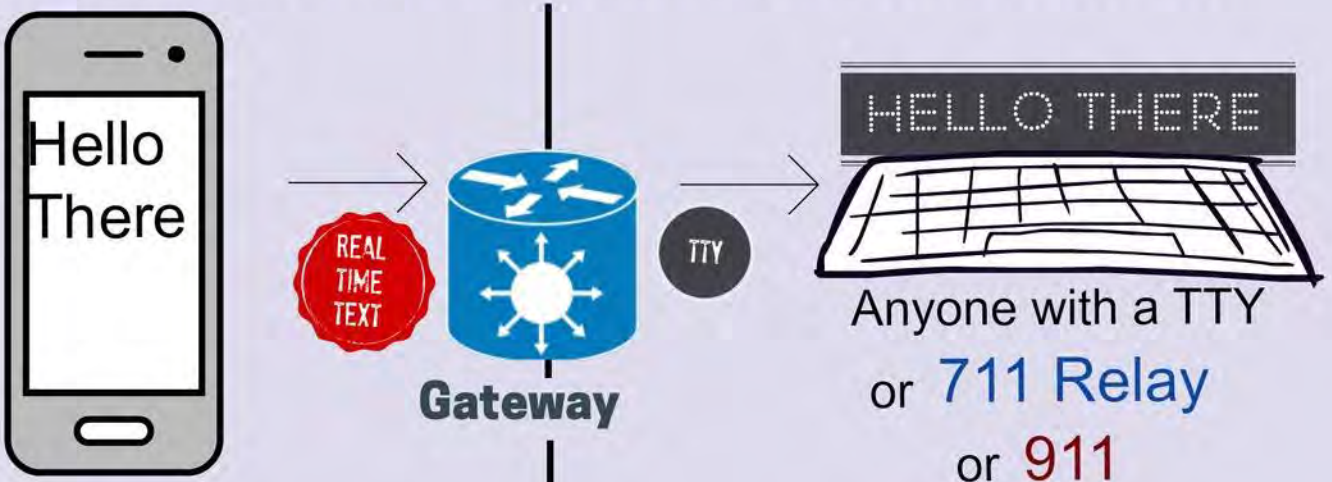
911

711 Relay

Anyone with a TTY

REAL TIME TEXT (RTT)

Proposals call for a RTT to TTY gateway to convert text from an IP Network to the PSTN.



HAMILTON relay

Building and operating gateways is expensive, so the proposed standards recommend that Real Time Text be "turned off" by default, and require a user to manually turn it on.

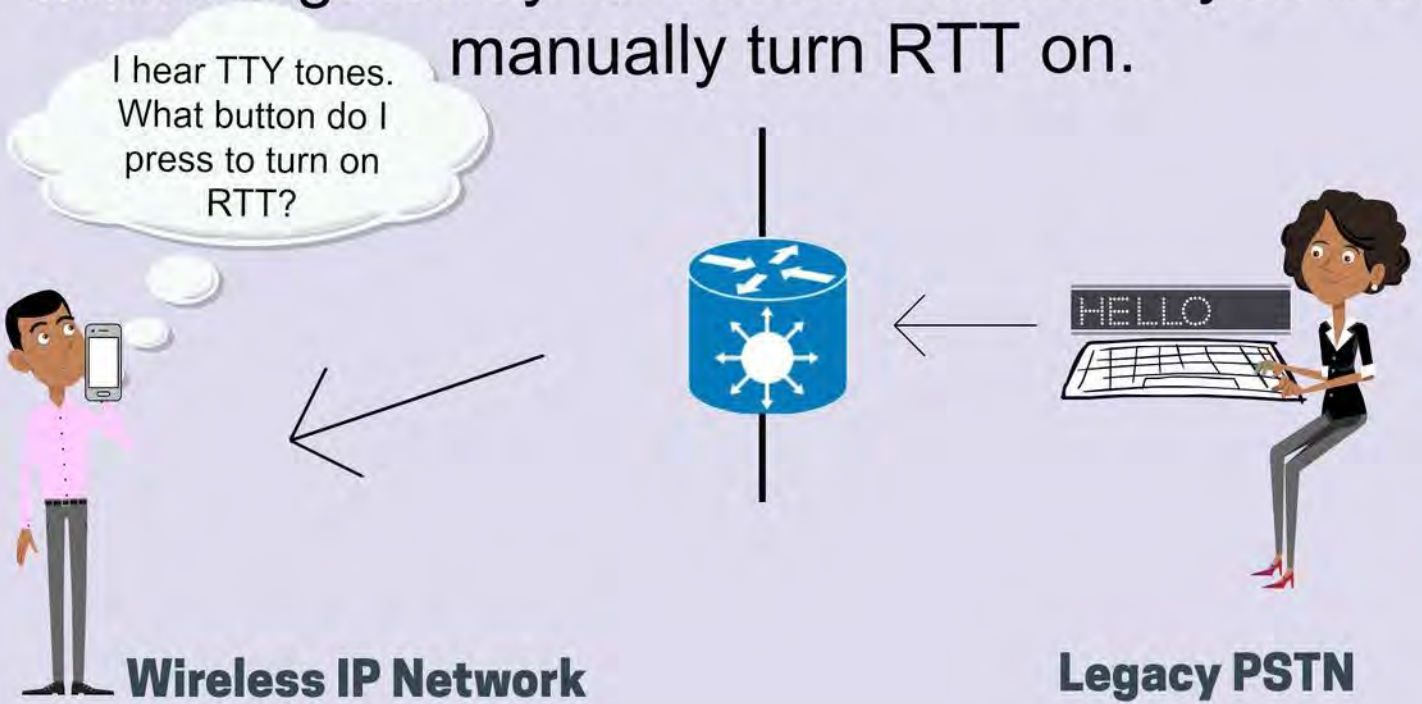
See:
*ATIS 100068
*3GPP 29.163 Annex I

"Default off" protects the carriers from having to use a gateway on calls that don't need it, like most voice calls.

Wireless IP Network

Legacy PSTN

But "default off" is more difficult for phone calls where a gateway IS needed because you have to manually turn RTT on.



Additionally, there are a number of limitations with TTYs that make using RTT to TTY gateways potentially confusing for consumers.

HAMILTON relay

Real Time Text is Super Fast

AND TTY TEXT IS SLOW

HAMILTON relay

Real Time Text habla Español

AND TTY HABLA ESPA'OL

ATIS/3GPP Gateway Proposal

Pros:

1. Gateways allow RTT devices and TTYs to 'talk.'
2. Gateways enable direct dialing.

Cons:

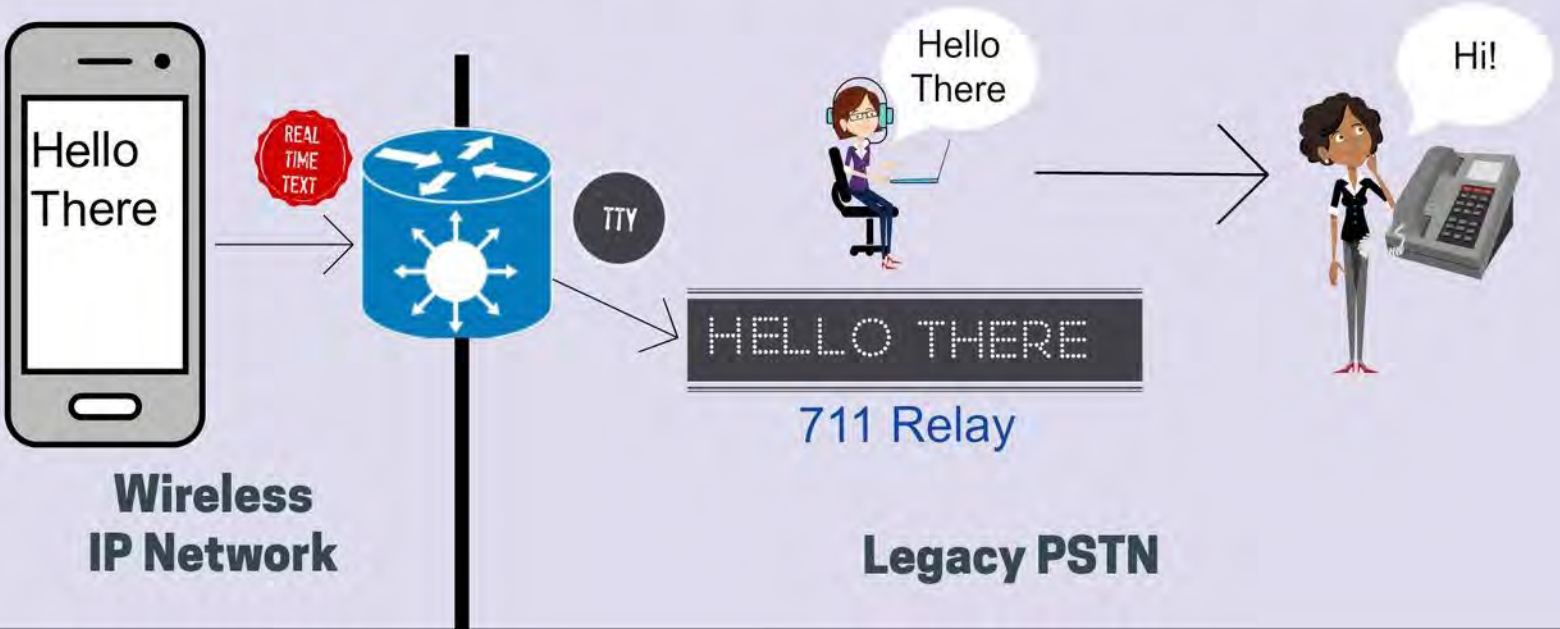
1. RTT is "default off" which impacts consumers.
2. TTY and RTT have differences, so gateways can be confusing for consumers not familiar with TTY.

HAMILTON relay

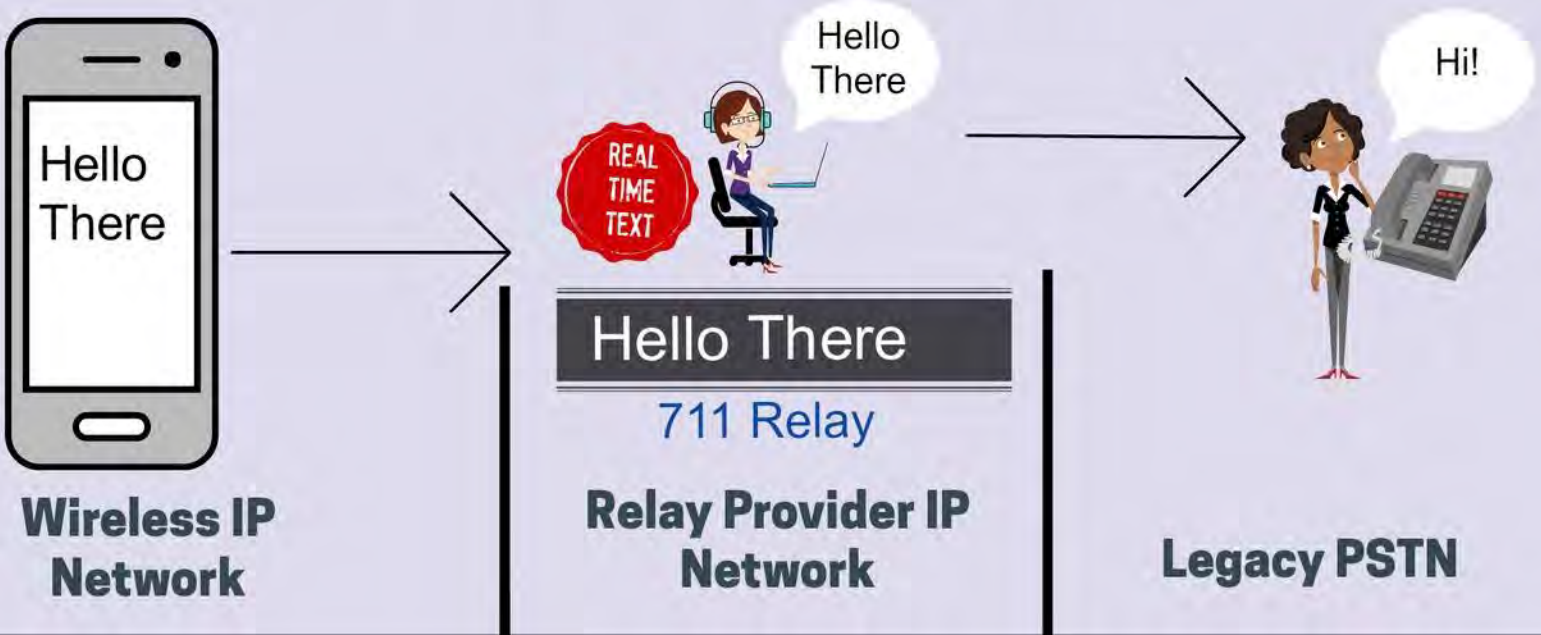
Hamilton Relay doesn't like words like "default off" and "confusing for consumers" so we have a recommendation.

The FCC should require TRS Providers to support RTT and the wireless carriers to deliver and accept calls to/from 711 via an IP interconnection with RTT as "default on."

711 calls via an ATIS/3GPP gateway would be slower, more expensive, and less functionally equivalent than Relay should be for "RTT to Voice" relay calls.



Consumers deserve a faster experience for "RTT to Voice" relay calls.



If TRS Providers support RTT, they can provide an 'attended' gateway to TTYs, since they already support TTYs.

HAMILTON relay

In addition to supporting TTYs, TRS Providers already support other faster text protocols and could connect RTT to these as well.

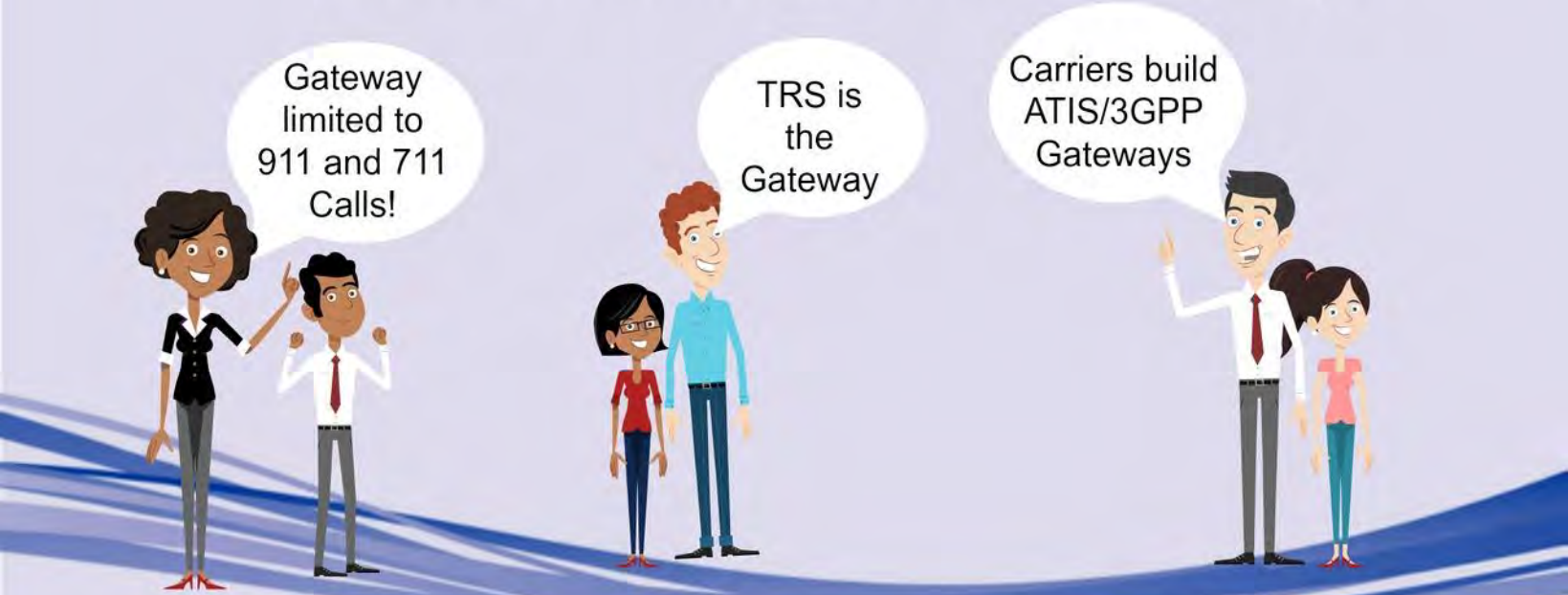
HAMILTON relay

TRS Providers can provide an attended gateway that includes a communications assistant (CA).

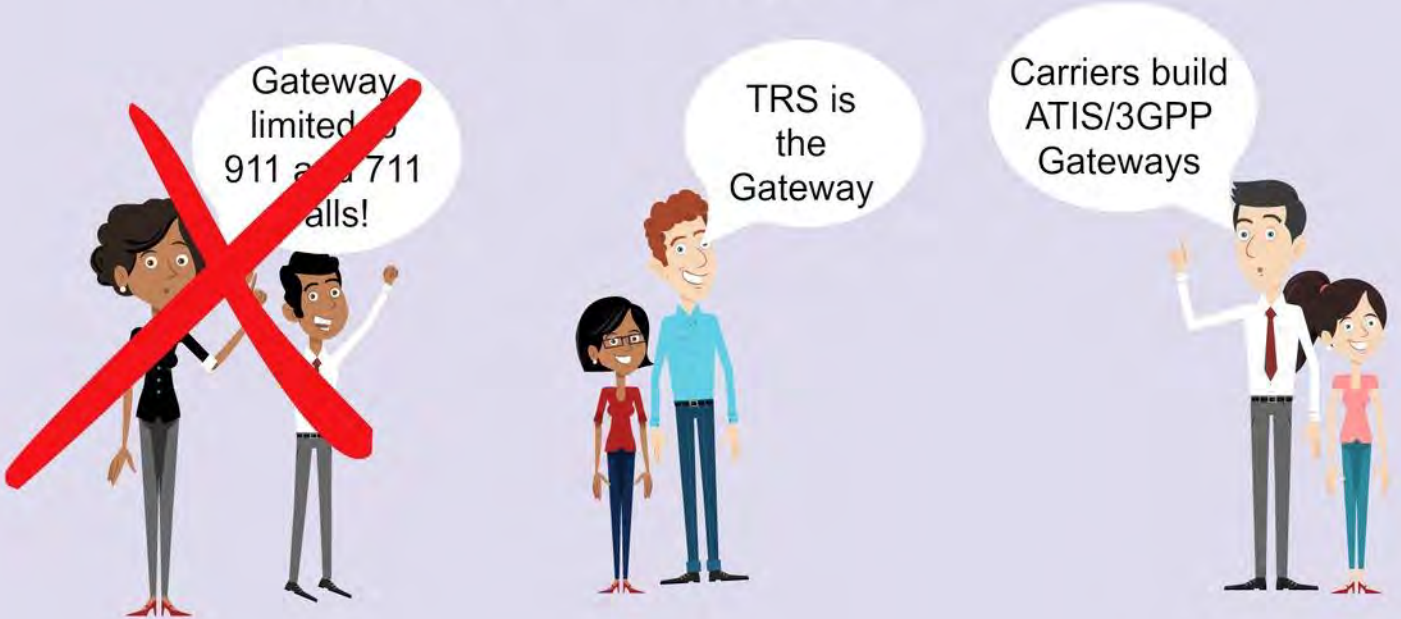
CAs can help consumers with the RTT to TTY differences so they aren't confused.

And then drop off the call if not needed.

NPRM Commenters have differing positions on implementing gateways.



Hamilton opposes solutions that do not support all call types.



TRS is the Gateway

Pros:

1. Improved speed for "RTT to Voice" Relay calls.
2. Gateway to TTY with optional assistance of a CA.
3. Encourages RTT devices to be "default on".
4. Enables carriers to not need their own gateway.
5. Consumers already familiar with 711 for TTY calls.

HAMILTON relay

Since Relay Providers can gateway to everyone, they can gateway to 911.

And if someone calls 711 first, we'll route it to the right PSAP if geolocation is provided.

Ideally RTT 911 calls would route directly to PSAPs, possibly through a Text Control Center.

HAMILTON relay

To ensure functional equivalency, at a minimum the FCC should require TRS providers and wireless carriers to communicate in RTT.

In addition, the FCC could require that TRS Providers become the gateway, thus removing this burden from wireless carriers.